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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

David PARTAIN et al.

Application No.: 09/941,878

Filed: August 29, 2001

For: Bandwidth Broker for Cellular Radio  
Access Networks

Group Art Unit: Unassigned

Examiner: Unassigned

TRANSMITTAL LETTER FOR MISSING PARTS OF APPLICATION**BOX: MISSING PART**Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In complete response to the Notice to File Missing Parts of Application Under 37 C.F.R. § 1.53(b) which was mailed on October 10, 2001, but only received by fax on March 22, 2002; enclosed please find:

- a Combined Declaration and Power of Attorney signed by the inventor(s) and the surcharge of [ ] \$65.00 (205)  \$130.00 (105) as set forth in 37 C.F.R. § 1.16(e);
- a Request for Refund;
- a Petition for Extension of Time;
- please charge \$ 130.00 to Deposit Account No. 02-4800 for the fee due for missing parts.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER &amp; MATHIS, L.L.P.

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(919) 941-9240

Date: MARCH 26, 2002

By Michael J. Crowley  
Michael J. Crowley

Registration No. 49,909  
I certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on 3/26/02  
Date

J. Harris  
(Typed or printed name of person signing the certificate)

J. Harris  
(Signature of person signing the certificate)

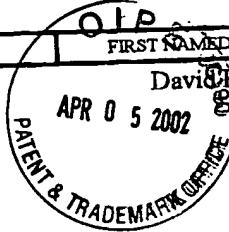
March 26, 2002  
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UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
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APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/941,878	08/29/2001	David Partain	040020-290



CONFIRMATION NO. 7838  
FORMALITIES LETTER  
  
\*OC00000006828224\*

Ronald L. Grudziecki  
BURNS, DOANE, SWECKER & MATHIS, L.L.P.  
P.O. Box 1404  
Alexandria, VA 22313-1404

Date Mailed: 10/02/2001

**NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION**

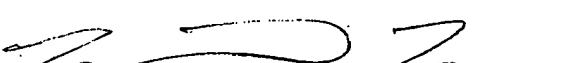
**FILED UNDER 37 CFR 1.53(b)**

***Filing Date Granted***

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(l) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 130.

*A copy of this notice **MUST** be returned with the reply.*

  
Customer Service Center  
Initial Patent Examination Division (703) 308-1202

PART 3 - OFFICE COPY

04/09/2002 BABRAHA1 00000010 024800 09941878

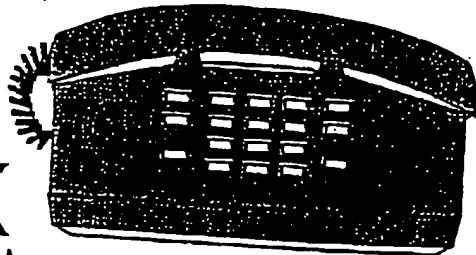
01 FC:105 130.00 CH

## U.S. Department of Commerce

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Patent  
Attorney's Docket No. 040020-290

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

David PARTAIN et al.

Application No.: 09/941,878

Filed: August 29, 2001

For: Bandwidth Broker for Cellular Radio Access  
Networks

) Group Art Unit: Unassigned

) Examiner: Unassigned

It is hereby certified that this correspondence is being deposited in the United States Postal Service as First Class Mail and will be addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231, on MAR 26, 2002.  
Date

J. Harris

(Typed or printed name of person signing the certificate)

J. Harris

(Signature of person signing the certificate)

MAR 26, 2002

(Date of Signature)

REQUEST FOR REFUND

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicants respectfully request a refund of any fee for extensions of time related to filing of Missing Parts for this application. Applicants respectfully submit that a search of the file jacket and docket record has revealed that such notification of Missing Parts Requirement was never received. A copy of the docket record where the Missing Parts Requirement notification would have been entered, had it been received and docketed, is attached. Had such notification been received, the "Action" column would have an entry indicating "Missing Parts". A docket prompt for a status check for missing parts, shown as "SC-Missing Parts" in the "Action" column in the docket record, resulted in a telephone inquiry to the Office of Initial Patent Examination to determine the status of the application. As a result of the inquiry, the Office, on March 22, 2002, provided a faxed copy of the Notice, to which Applicants now respond.

Applicants respectfully request a refund to Deposit Account No. 02-4800 in the amount of \$1,440.00 for the extensions of time required to file Missing Parts.

While no fee is believed to be necessary, the Commissioner is authorized to charge any appropriate fee that may be required by this paper to Deposit Account No. 02-4800.

If there are any questions, the undersigned attorney may be contacted at (919) 941-8838.

Your prompt and favorable attention to this matter is respectfully requested.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

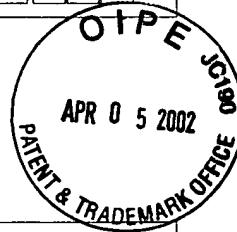
Post Office Box 1404  
Alexandria, Virginia 22313-1404  
(919) 941-9240

By: Michael J. Crowley  
Michael J. Crowley  
Registration No. 49,009

Date: MAR 26, 2002

OPER	CIN	ENTERED 8/30/01	MODIFIED 2/27/02	ATTORNEYS	RLG / MG	MJC	PRINTED ON: 3/22/02		
BDSM#	040020-290.001	CNTRY US	UNITED STATES	NEW/CON	FCA	RELATED 040020-290			
PATS#	P34161US1	TYPE UTL	SERIAL# 09/941,878	PATENT#		STAT PENDING			
TITLE	A Bandwidth Broker for Cellular Radio access Networks					CONF#			
CLIENT	040020	Ericsson (BR) RMOG		1	CREF	SE	TYPE		
AGENT				AREF		CLAIMS	LINK		
PRIOR	8/31/00	MAIL		FILE 8/29/01	PUBL	ISSUE	EXP 8/29/21	1ST	8/29/01

ID	O	ACTION	BASE	DUE IN	DUE	EXTNS	FINAL	EXT	RESPONSE	CALL	1	2	P
DF	Y	Formal Dwgs Filed	8/29/01										
8 SHEETS													
PD	N	Priority claim due	8/29/01	4 M	12/29/01		12/29/01	0	8/29/01	1 M	Y	Y	Y
DS	N	Inf Disclosure Stmt	8/29/01	4 M	12/29/01	3 1	3/29/02	3		1 M	Y	Y	Y
SF	N	SC - Filing Receipt	8/29/01	7 M	3/29/02	0	3/29/02	0		15 D	Y	Y	Y
Application was filed 8/29/01													
SM	N	SC - Missing Parts	8/29/01	7 M	3/29/02		3/29/02	0		15 D	Y	Y	Y
Application was filed 8/29/01													
SO	N	SC - 1st OA	8/29/01	18 M	2/28/03	0	2/28/03	0		15 D	Y	Y	Y
INVENTORS													
Partain, David													
Wallentin, Pontus													



PRIOR APPLICATIONS													
REFERENCE#	CNTRY	SERIAL#	FILED	TITLE / DESCRIPTION					TYPE				
040020-290	US	60/229,056	8/31/00	A Bandwidth Broker for Cellular Radio access Networks					APPL				

#### NOTES

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#### ABSTRACT

An architecture for resource management of an IP-based cellular radio access network is presented. A measurement-based admission control scheme is used to monitor the load for each path in the network and QoS (quality of service) class and resource decisions are made based upon that information. A bandwidth broker is introduced in the cellular radio access network (RAN). The bandwidth broker processes the on-demand admission requests for IP resources by using the results of load control measurements. Since the requests can be processed very quickly using a simple table look-up, response times are fast, and the architecture is thus suitable for the cellular environment.